

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1-60. (cancelled)

61. (previously presented) A kit for assaying for the presence of a mutation associated with Familial Dysautonomia in an individual comprising primers 18F (SEQ ID NO:82) and 23R (SEQ ID NO:84) that are capable of amplifying a region of IKBKAP of sufficient size to detect a FD1 mutation or a FD2 mutation, wherein said region amplified comprises a FD1 or a FD2 mutation.

62-67. (cancelled)

68. (previously presented) The kit of claim 61, wherein the region amplified comprises position 2,397 of SEQ ID NO:2.

69-80. (cancelled)

81. (currently amended) An isolated oligonucleotide probe comprising consisting of at least 16 contiguous nucleotides of the portion of SEQ ID NO:1 from nucleotide 32,642 to nucleotide 36,846 which include position 34,201 of SEQ ID NO:1, or the complement thereof, said oligonucleotide probe being suitable for the detection of the FD mutation at position 34,201 of SEQ ID NO:1.

82. (previously presented) The oligonucleotide probe of claim 81 which is 16 nucleotides.

83. (currently amended) An isolated oligonucleotide probe comprising consisting of at least 16 contiguous nucleotides of the portion of SEQ ID NO:1 from nucleotide 32,642 to nucleotide NYC\_IMANAGE-842869 v1

36,846 which include position 33,714 of SEQ ID NO:1, or the complement thereof, said oligonucleotide probe being suitable for the detection of the FD mutation at position 33,714 of SEQ ID NO:1.

84. (previously presented) The oligonucleotide probe of claim 83 which is 16 nucleotides.

85 - 86. (canceled)

87. (currently amended) An isolated oligonucleotide probe ~~comprising~~ consisting of at least 16 contiguous nucleotides of the portion of SEQ ID NO:1 from nucleotide 32,642 to nucleotide 36,846 which include position 34,201 of SEQ ID NO:1, or the complement thereof, except that the nucleotide corresponding to 34,201 is a cytosine, or a guanine in said complement, said oligonucleotide probe being suitable for the detection of the FD mutation at position 34,201 of SEQ ID NO:1.

88. (previously presented) The oligonucleotide probe of claim 87 which is 16 nucleotides.

89. (currently amended) An isolated oligonucleotide probe ~~comprising~~ consisting of at least 16 contiguous nucleotides of the portion of SEQ ID NO:1 from nucleotide 32,642 to nucleotide 36,846 which include position 33,714 of SEQ ID NO:1, or the complement thereof, except that the nucleotide corresponding to 33,714 is a cytosine, or a guanine in said complement, said oligonucleotide probe being suitable for the detection of the FD mutation at position 33,714 of SEQ ID NO:1.

90. (previously presented) The oligonucleotide probe of claim 89 which is 16 nucleotides.

91 - 99. (canceled)

100. (currently amended) A kit for the detection of a mutation associated with Familial Dysautonomia in a sample from a human subject, said kit comprising an isolated oligonucleotide probe selected from the group consisting of

(a) an isolated oligonucleotide probe comprising consisting of at least 16 contiguous nucleotides of the portion of SEQ ID NO:1 from nucleotide 32,642 to nucleotide 36,846 which include position 34,201 of SEQ ID NO:1 and being suitable for the detection of the FD mutation at position 34,201;

(b) the complement of an isolated oligonucleotide probe comprising consisting of at least 16 contiguous nucleotides of the portion of SEQ ID NO:1 from nucleotide 32,642 to nucleotide 36,846 which include position 34,201 of SEQ ID NO:1 and being suitable for the detection of the [[FC]] FD mutation at position 34,201;

(c) an oligonucleotide probe consisting of at least 16 contiguous nucleotides of the nucleotide sequence of exon 20 and intron 20 of the IKBKAP gene of SEQ ID NO:1 which include position 34,201 of SEQ ID NO:1, and being suitable for the detection of the FD mutation at position 34,201 of SEQ ID NO:1;

(d) the complement of an oligonucleotide probe consisting of at least 16 contiguous nucleotides of the nucleotide sequence of exon 20 and intron 20 of the IKBKAP gene of SEQ ID NO:1 which include position 34,201 of SEQ ID NO:1, and being suitable for the detection of the FD mutation at position 34,201 of SEQ ID NO:1;

[[(e)]] (c) an isolated oligonucleotide probe comprising consisting of at least 16 contiguous nucleotides of the portion of SEQ ID NO:1 from nucleotide 32,642 to nucleotide

36,846 which include position 34,201 of SEQ ID NO:1 except that the nucleotide corresponding to 34,201 is a cytosine and being suitable for the detection of the FD mutation at position 34,201 of SEQ ID NO:1;

[(f)] (d) the complement of an isolated oligonucleotide probe comprising consisting of at least 16 contiguous nucleotides of the portion of SEQ ID NO:1 from nucleotide 32,642 to nucleotide 36,846 which include position 34,201 of SEQ ID NO:1 except that the nucleotide corresponding to 34,201 in the complement is a guanine and being suitable for the detection of the FD mutation at position 34,201 of SEQ ID NO:1;

(g) an oligonucleotide probe consisting of at least 16 contiguous nucleotides of the nucleotide sequence of exon 20 and intron 20 of the IKBKAP gene of SEQ ID NO:1 which include position 34,201 of SEQ ID NO:1, except that the nucleotide corresponding to 34,201 is a cytosine and being suitable for the detection of the FD mutation at position 34,201 of SEQ ID NO:1;

(h) the complement of an oligonucleotide probe consisting of at least 16 contiguous nucleotides of the nucleotide sequence of exon 20 and intron 20 of the IKBKAP gene of SEQ ID NO:1 which include position 34,201 of SEQ ID NO:1, except that the nucleotide corresponding to 34,201 in the complement is a guanine and being suitable for the detection of the FD mutation at position 34,201 of SEQ ID NO:1.

[(i)] (e) an isolated oligonucleotide probe comprising consisting of at least 16 contiguous nucleotides of the portion of SEQ ID NO:1 from nucleotide 32,642 to nucleotide 36,846 which include position 33,714 of SEQ ID NO:1 and being suitable for the detection of the FD mutation at position 33,714;

[[(j)]] (f) the complement of an isolated oligonucleotide probe comprising consisting of at least 16 contiguous nucleotides of the portion of SEQ ID NO:1 from nucleotide 32,642 to nucleotide 36,846 which include position 33,714 of SEQ ID NO:1 and being suitable for the detection of the [[FC]] FD mutation at position 33,714;

(k) an oligonucleotide probe consisting of at least 16 contiguous nucleotides of the nucleotide sequence of exon 19 and intron 19 of the IKBKAP gene of SEQ ID NO:1 which include position 33,714 of SEQ ID NO:1, and being suitable for the detection of the FD mutation at position 33,714 of SEQ ID NO:1;

(l) the complement of an oligonucleotide probe consisting of at least 16 contiguous nucleotides of the nucleotide sequence of exon 19 and intron 19 of the IKBKAP gene of SEQ ID NO:1 which include position 33,714 of SEQ ID NO:1, and being suitable for the detection of the FD mutation at position 33,714 of SEQ ID NO:1;

[[(m)]] (g) an isolated oligonucleotide probe comprising consisting of at least 16 contiguous nucleotides of the portion of SEQ ID NO:1 from nucleotide 32,642 to nucleotide 36,846 which include position 33,714 of SEQ ID NO:1 except that the nucleotide corresponding to 33,714 is a cytosine and being suitable for the detection of the FD mutation at position 33,714 of SEQ ID NO:1; and

[[(n)]] (h) the complement of an isolated oligonucleotide probe comprising consisting of at least 16 contiguous nucleotides of the portion of SEQ ID NO:1 from nucleotide 32,642 to nucleotide 36,846 which include position 33,714 of SEQ ID NO:1 except that the nucleotide corresponding to 33,714 in the complement is a guanine and being suitable for the detection of the FD mutation at position 33,714 of SEQ ID NO:1[[;]].

(e) an oligonucleotide probe consisting of at least 16 contiguous nucleotides of the nucleotide sequence of exon 19 and intron 19 of the IKBKAP gene of SEQ ID NO:1 which include position 33,714 of SEQ ID NO:1, except that the nucleotide corresponding to 33,714 is a cytosine and being suitable for the detection of the FD mutation at position 33,714 of SEQ ID NO:1; and

(p) the complement of an oligonucleotide probe consisting of at least 16 contiguous nucleotides of the nucleotide sequence of exon 19 and intron 19 of the IKBKAP gene of SEQ ID NO:1 except that the nucleotide corresponding to 33,714 in the complement is a guanine and being suitable for the detection of the FD mutation at position 33,714 of SEQ ID NO:1.

101. (previously presented) The oligonucleotide probe of claim 100 which is 16 nucleotides.